

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 16254

Port of Greenock Date of First Survey 8<sup>th</sup> May 1912 Date of Last Survey 29<sup>th</sup> May 1912 No. of Visits 11  
 No. in Reg. Book on the Iron or Steel S.S. "Kirkoswald" Port belonging to Liverpool  
 Built at Dumbarton By whom American Electric Co. When built 1912  
 Owners \_\_\_\_\_ Owners' Address \_\_\_\_\_  
 Yard No. 444 Electric Light Installation fitted by James Scott Ltd. Bootle When fitted 1912

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Engine, Single 6/2x6 Open Front Syphon drip lubrication 350 R.P.M.  
 Dynamo Direct coupled to engine 6 Pole Protected type.  
 Capacity of Dynamo 68 Amperes at 110 Volts, whether continuous or alternating current Contin.  
 Where is Dynamo fixed Engine Room Bottom Platform Whether single or double wire system is used Double  
 Position of Main Switch Board Aft Bulkhead having switches to groups 4 Circuits of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Engine Room 1-6 way. Wheel house 1-6 way

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 50 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 On porcelain or slate bases

Total number of lights provided for 91 arranged in the following groups:—

A Navigation	5	lights each of	32	candle power requiring a total current of	5 1/2	Amperes
B Forward	38	lights each of	16	candle power requiring a total current of	19	Amperes
C Midships	30	lights each of	16	candle power requiring a total current of	15	Amperes
D Engine Rm	18	lights each of	16	candle power requiring a total current of	9	Amperes
E		lights each of		candle power requiring a total current of		Amperes
1 Mast head light with	1	lamps each of	32	candle power requiring a total current of	1	Amperes
2 Side light with	1	lamps each of	32	candle power requiring a total current of	2	Amperes
5 Cargo lights of	6-16			candle power, whether incandescent or arc lights	Incand.	

If are lights, what protection is provided against fire, sparks, &c. No arc lamps

Where are the switches controlling the masthead and side lights placed Wheel House on Bridge

## DESCRIPTION OF CABLES.

Main cable carrying 48 1/2 Amperes, comprised of 19 wires, each 14 L.S.G. diameter, .094 square inches total sectional area  
 Branch cables carrying 19 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .022 square inches total sectional area  
 Branch cables carrying Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .007 square inches total sectional area  
 Leads to lamps carrying 3 Amperes, comprised of 3 wires, each 20 L.S.G. diameter, .003 square inches total sectional area  
 Cargo light cables carrying 3 Amperes, comprised of 168 wires, each 38 L.S.G. diameter, .004 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables are coated with pure and vulcanizing India Rubber, Taped and vulcanised together, braided, and protected by half Iron wires

Joints in cables, how made, insulated, and protected No joints Distribution & loop in system

Are all the joints of cables thoroughly soldered, resin only having been used as a flux — 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

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 Armoured wires clipped to beams & bulkheads.

Saloon and accommodation. Lead covered wire.



**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 wires

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

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

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

How are cables carried through beams in fibre insulating bushes through bulkheads, &c. Watertight glands

How are cables carried through decks in galv iron deck pipes bolted to decks

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

If so, how are they protected —

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 Plugged into 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 1 - 120 supplied with a voltmeter and 1 - 130 an amperemeter, fixed on 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 100 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 2,500 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.

**JAMES SCOTT & SONS, LTD.**  
*Edwley*

Electrical Engineers

Date 30/5/12

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 150 ft

Distance between dynamo or electric motors and steering compass 140

The nearest cables to the compasses are as follows:—

A cable carrying	<u>5</u>	Amperes	<u>12</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>5</u>	Amperes	<u>Sight inside</u>	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 Yes

The maximum deviation due to electric currents, etc., was found to be None degrees on — course in the case of the standard compass and None degrees on — course in the case of the steering compass.

**ARCHER McMILLAN & SON, LTD.**

*W. W. M. McMillan*

Builder's Signature. Date

**GENERAL REMARKS.**

The installation was tested on completion and found to work satisfactorily.

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

*APL*  
*JWD 24/6/12*

*Wm R. Austin*

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

Committee's Minute

**GLASGOW**

18 JUN 1912

Elec. Light



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.