

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17814

Port of Glasgow Date of First Survey ✓ Date of Last Survey 27 March 1900 No. of Visits ✓  
 No. in Reg. Book on the Steel vehicular ferry Himmiston Port belonging to Glasgow  
 Built at Paisley By whom Fleming & Ferguson Ltd When built 1900  
 Owners The Clyde Trustees Owners' Address Glasgow  
 Yard No. 284 Electric Light Installation fitted by J. Charters Glasgow When fitted 20/3/00

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

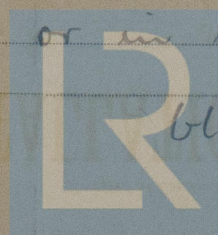
One high speed vertical open type engine coupled to one compound round dynamo.  
 Capacity of Dynamo 55 Amperes at 60 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine room starting platform  
 Position of Main Switch Board Bulkhead beside dynamo having switches to groups A. B. & C. of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each one in engine room one in lamp room  
each with single light switches.  
 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 tin 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 Wire 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 48 arranged in the following groups:—  
 A Engine Room 17 lights each of 16 candle power requiring a total current of 16 Amperes  
 B Elevating DK 11 lights each of 7 of 16 cp. 4 of 32 candle power requiring a total current of 11.2 Amperes  
(3 in cabins on 11/16 mile)  
 C Bridge DK 20 lights each of 16 candle power requiring a total current of 18.6 Amperes  
 D ✓ lights each of ✓ candle power requiring a total current of ✓ Amperes  
 E ✓ lights each of ✓ candle power requiring a total current of ✓ Amperes  
✓ Mast head light with ✓ lamps each of ✓ candle power requiring a total current of ✓ Amperes  
✓ Side light with ✓ lamps each of ✓ candle power requiring a total current of ✓ Amperes  
✓ Cargo lights of ✓ candle power, whether incandescent or arc lights ✓  
 If arc lights, what protection is provided against fire, sparks, &c. ✓  
 Where are the switches controlling the masthead and side lights placed ✓

## DESCRIPTION OF CABLES.

Main cable carrying Amperes, comprised of 38 wires, each 18 L.S.G. diameter, .0702 square inches total sectional area  
 A Branch cables carrying 16 Amperes, comprised of 19 wires, each 20 L.S.G. diameter, .0197 square inches total sectional area  
 B Branch cables carrying 12 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, .0129 square inches total sectional area  
2.8  
 C Leads to lamps carrying 18.6 Amperes, comprised of 19 wires, each 20 L.S.G. diameter, .0197 square inches total sectional area  
 Cargo light cables carrying ✓ Amperes, comprised of ✓ wires, each ✓ L.S.G. diameter, ✓ square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure vulcanising India Rubber, India Rubber coated tape  
all vulcanised together, braided, and coated with compound.  
 Joints in cables, how made, insulated, and protected soldered, insulated with pure rubber & composition tape.  
 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 in wood casings, or in iron tubing



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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 on Deck going up to Bridge in piping as used.

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

What special protection has been provided for the cables near boiler casings wood casing.

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

How are cables carried through beams none through bulkheads, &c. in fibre tubing

How are cables carried through decks in deck pipes.

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 ✓ none How fixed ✓

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

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 on main switchboard in Engine Room.

The copper used is guaranteed to have a conductivity of 98 7/10 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.

J. Charters  
None.

Electrical Engineers

Date 20th March/1900

COMPASSES.

Distance between dynamo or electric motors and standard compass ✓

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
A cable carrying	Amperes	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 ✓

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

For Fleming & Ferguson, Ltd.

Builder's Signature.

Date

GENERAL REMARKS.

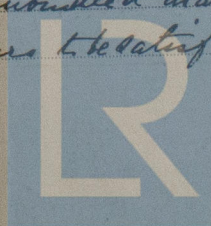
The Electric Lighting of this vessel is fitted in accordance with the rules & has been satisfactorily tried under full power.

George Murdoch.

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

Committee's Minute

It is submitted that this installation appears to be satisfactory.



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