

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 39291

Port of Glasgow Date of First Survey 22.10.19 Date of Last Survey 28.10.19 No. of Visits 2  
 No. in Reg. Book on the Iron or Steel T.S.S. Wexford Port belonging to London  
 Built at Renfrew By whom Messrs W. Simons & Co When built 1919  
 Owners The Admiralty Owners' Address London  
 Yard No. 621 Electric Light Installation fitted by W. J. Charters When fitted 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two enclosed forced lubrication single cylinder engines direct coupled to two compound wound dynamos.

Capacity of Dynamos 114 Amperes at 105 Volts, whether continuous or alternating current Continuous  
 Where are Dynamos fixed Engine Rm. Forward Port & Starboard Whether single or double wire system is used Double wire  
 Position of Main Switch Board above Starboard Dynamo having switches to groups A, B, C, D, E, F, G, H, I, J of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each None.

Fuses 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  
 Fuse is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits yes  
 Are the fuses of non-oxidizable metal Copper & Tin and constructed to fuse at an excess of 100 per cent over the normal current  
 Are all fuses fitted in easily accessible positions yes Are the fuses of standard dimensions Admiralty Standard 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 fuses constructed of incombustible materials and fitted on incombustible bases yes  
 number of lights provided for 147 @ 16cp, 1 @ 32cp, arranged in the following groups: 5 Radiators, 1 Circulator, 1 Rotary Type 4 M-10 S.L.P.

lights each of	candle power requiring a total current of	Amperes
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1 Mast head light with 1 lamp each of 16 candle power requiring a total current of .56 Amperes  
 2 Side light with 2 lamps each of 1 @ 16cp & 1 @ 32cp candle power requiring a total current of 1.68 Amperes

Deck Cluster orange lights of each of 400 candle power, whether incandescent or arc lights incandescent  
 Are lights, what protection is provided against fire, sparks, &c. ✓

Where are the switches controlling the masthead and side lights placed in wheelhouse

## DESCRIPTION OF CABLES.

Each cable carrying 114 Amperes, comprised of 37 wires, each 15 S.W.G. diameter, .150 square inches total sectional area  
 Each cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area  
 Each cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area  
 Cables to lamps carrying .56 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .00246 square inches total sectional area  
 Light cables carrying 4.4 Amperes, comprised of 19 wires, each 22 S.W.G. diameter, .01148 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

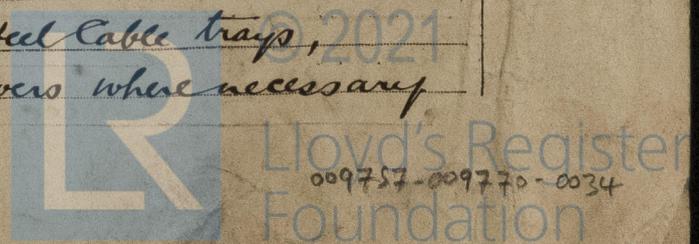
Admiralty Patterns 247 to 254, 546 for Clusters, 1680 C.F.S  
Portable connections, 2520, 2521 and 2522 for Bell & Telephones

How are the cables, how made, insulated, and protected None

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances ✓ 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 Clipped to perforated steel cable trays, bulkheads, beams etc. Protected by sheet iron covers where necessary



**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 covering

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

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

What special protection has been provided for the cables in engine room Perforated cable trays

How are cables carried through beams lead bushed holes through bulkheads, &c. A.P. W/T glands.

How are cables carried through decks W/T Deck tubes.

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

If so, how are they protected perforated steel cable trays covered where necessary.

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

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

Where are the main switches and fuses for these lights fitted in the spaces.

If in the spaces, how are they specially protected Cast Electrical Bronze cases.

Are any switches or fuses fitted in bunkers No.

Cargo light cables, whether portable or permanently fixed Portable How fixed  A.P. 394R Box.

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

How are the returns from the lamps connected to the hull

Are all the joints with the hull in accessible positions

Is the installation supplied with a voltmeter yes 2 in No, and with an amperemeter yes 2 in No, fixed in Switchboard.

**VESSELS BUILT FOR CARRYING PETROLEUM.**

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas

Are any switches, fuses, 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 not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 1000 megohms per <sup>1000 Yards</sup> statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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. Electrical Engineers Date 23rd October 1919.

**COMPASSES.**

Distance between dynamo or electric motors and standard compass Dynamos 76' Rotary 32'

Distance between dynamo or electric motors and steering compass Dynamos 74' Rotary 26'

The nearest cables to the compasses are as follows:—

A cable carrying	<u>20</u>	Amperes	<u>11</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>5</u>	Amperes	<u>10</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>3</u>	Amperes	<u>in</u>	feet from standard compass	<u>in</u>	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 Nil degrees on any course in the case of the standard compass and FOR WILLIAMSON'S degrees on any course in the case of the steering compass.

James Murray Builder's Signature. Date 17th Nov 1919

**GENERAL REMARKS.**

This Installation has been fitted on board under special survey tested under full working conditions in the presence of an Admiralty Inspecting Officer & found satisfactory

It is submitted that this vessel is eligible for THE RECORD. Elec. Light. JWD 4/12/19. J. Stanley Rankin. Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 2 DEC 1919

Elec. Light. W.M.



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