

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 34629.

Port of Glasgow Date of First Survey 5/10/14 Date of Last Survey 27/1/14 No. of Visits 8  
 No. in Reg. Book on the Iron or Steel Tender, S. SIR HARVEY ADAMSON Port belonging to Glasgow  
 Built at Paint house By whom Messrs A. & J. Inglis When built 1914  
 Owners British India S.N. Co. Ltd Owners' Address Glasgow, Glasgow  
 Yard No. 306 Electric Light Installation fitted by Telford Grier & Mackay Ltd When fitted 1914

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

Compound Open Type Engine 7 1/2" x 7" direct coupled to continuous current 18 kW. Compound wound dynamo  
Open Type 5 1/2" x 5" Engine direct coupled to continuous current Comp. W. 6 kW Dyn.  
 Capacity of Dynamo 5 { 180 } Amperes at 100 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed In Engine Room Whether single or double wire system is used Double  
 Position of Main Switch Board Beside dynamo having switches to groups 9 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each none  
n° 4 = 20 lt n° 5 = 25 lts n° 6 = 41 x 2 arcs n° 7 = 38 lts n° 8 = 11 lts n° 9 = Mains

If 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  
 If vessel 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 yes and constructed to fuse at an excess of 150 per cent over the normal current  
 Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 207 inc. & 2 arcs arranged in the following groups :-

A	11 lights each of	16	candle power requiring a total current of	6	Amperes
B	39 lights each of	16	candle power requiring a total current of	20	Amperes
C	21 lights each of	16	candle power requiring a total current of	11	Amperes
D	41 x 2 arcs lights each of	16	candle power requiring a total current of	31	Amperes
E	11 lights each of 5-32cp 6-16cp		candle power requiring a total current of	8	Amperes
	2 Mast head light with 1 lamp each of	32	candle power requiring a total current of	1	Amperes
	2 Side light with 1 lamp each of	32	candle power requiring a total current of	1	Amperes
	2 Cargo lights of	1,000	candle power, whether incandescent or arc lights		Arce

If arc lights, what protection is provided against fire, sparks, &c. Inner Globes & Outer Lanterns

Where are the switches controlling the masthead and side lights placed Chart room

**DESCRIPTION OF CABLES.**

Main cable carrying 180 Amperes, comprised of 61 wires, each n° 16 S.W.G. diameter, .193 square inches total sectional area  
 Branch cables carrying 6 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area  
 Branch cables carrying 20 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .013 square inches total sectional area  
 Leads to lamps carrying 3 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area  
 Cargo light cables carrying 10 Amperes, comprised of 178 wires, each 38 S.W.G. diameter, .005 square inches total sectional area

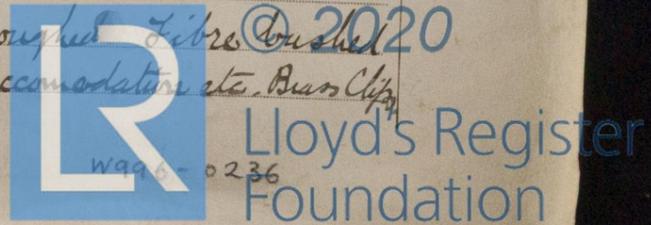
**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

Vulcanized India Rubber. Lead covered Steel Armoured Braided & Compounded. for Mains Engine room Holds etc.  
vulc. India Rubber Taped & Lead covered. Saloons Staterooms & Accomodation  
 Joints in 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 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 yes

How are the cables led through the ship, and how protected Armoured cables are led through Fibre crushed holes in beams, & clipped with Galv. Clips. Lead covered in Accomodation etc. Brass Clips



**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 Armoured  
Lead covered & Braided

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered, Arm<sup>d</sup> & Braided

What special protection has been provided for the cables near boiler casings Lead covered, Armoured & Braided

What special protection has been provided for the cables in engine room Lead covered Armoured & Braided

How are cables carried through beams Fibre Bushed Holes through bulkheads, &c. Packed Watertight Glands

How are cables carried through decks Pack Galvanized Steel Deck Lubes

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 Lead covered Armoured & Braided

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 fuses for these lights fitted Engine Room

If in the spaces, how are they specially protected ---

Are any switches or fuses fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable How fixed Cot Brass Watertight Plug 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 ---

Is the installation supplied with 2 voltmeters S, and with 2 amperemeters S, fixed 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 600 megohms per 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.

[Signature] Electrical Engineers Date 11/12/14

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 84 feet

Distance between dynamo or electric motors and steering compass 90 feet

The nearest cables to the compasses are as follows:—

A cable carrying	<u>8</u>	Amperes	<u>8 feet</u>	feet from standard compass	<u>5 feet</u>	feet from steering compass
A cable carrying	<u>1/2</u>	Amperes	<u>2 "</u>	feet from standard compass	<u>2 "</u>	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 --- degrees on --- course in the case of the standard compass and --- degrees on --- course in the case of the steering compass.

A. & J. INGLIS, LIMITED,

James D. Inglis Director Builder's Signature. Date 11<sup>th</sup> Decr. 1914

**GENERAL REMARKS.**

This installation has been fitted in accordance with the Rules & has been tested & found satisfactory.

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

JWD 16/12/14 Geo. A. Ferguson [Signature]  
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute GLASGOW 15 DEC. 1914

Elec Light [Signature]



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