

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2594

Port of Glasgow Date of First Survey 9<sup>th</sup> Oct Date of Last Survey 6<sup>th</sup> Nov No. of Visits 2  
 No. in Reg. Book on the Iron Steer S. S. Hoyle Part belonging to Belfast  
 Built at Leam By whom Miss F. B. Co. Ltd. When built 1907  
 Owners Shemrock Shipping Co. Ltd. Owners' Address \_\_\_\_\_  
 Yard No. \_\_\_\_\_ Electric Light Installation fitted by Wm. Harvie & Co. Ltd. When fitted 1907  
Glasgow

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

De Laval Turbo-Dynamo by Greenwood & Bately, Leeds  
 Capacity of Dynamo 60 Amperes at 110 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 Near Dynamo having switches to groups four in number of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Forward 3 way, Navigation 6 way, Midships 4 way, Engines 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 Yes  
 Are the cut outs of non-oxidizable metal yes tin and constructed to fuse at an excess of 50-100 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 porcelain bases

Total number of lights provided for 92 - 16 cp. arranged in the following groups :-

A	<u>13</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>7</u>	Amperes
B	<u>20</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>12</u>	Amperes
C	<u>31</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>18</u>	Amperes
D	<u>22</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>17</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
	<u>2</u>	Mast head lights with <u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.2</u>	Amperes
	<u>2</u>	Side lights with <u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.2</u>	Amperes
	<u>4</u>	Cargo lights of <u>4 - 32</u>		candle power, whether incandescent or arc lights	<u>Incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c. \_\_\_\_\_

Where are the switches controlling the masthead and side lights placed Whal House on Bridge  
Automatic "Bell-Tale" Indicator fitted for signal lights

### DESCRIPTION OF CABLES.

Main cable carrying 60 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .06000 square inches total sectional area  
 Branch cables carrying 18 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .02214 square inches total sectional area  
 Branch cables carrying 12 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, .0125 square inches total sectional area  
 Leads to lamps carrying 3 Amperes, comprised of 1 wire, each 16 L.S.G. diameter, .0032 square inches total sectional area  
 Cargo light cables carrying 4 Amperes, comprised of 14 wires, each 38 L.S.G. diameter, .0032 square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

Conductors of tinned copper, insulated with pure & vulcanised india-rubber, taped and lead covered in accommodation, and taped, braided, armoured with g. iron wire & braided overall in Eng. Room & Holds.  
 Joints in cables, how made, insulated, and protected No joints in ship, porcelain extension boxes used throughout

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 None

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 Twin Armoured & braided  
Cables led along angle iron in holds & clipped up with galv. iron clips.



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

Are they in places always accessible *All cables exposed & always accessible.*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead covered cables used*

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

What special protection has been provided for the cables near boiler casings *Armoured & Braided*

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

How are cables carried through beams *Lead lined holes* through bulkheads, &c. *W.T. glands where required.*

How are cables carried through decks *Gal. iron Deck tubes 12" high made W.T. required.*

Are any cables run through coal bunkers *Yes* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *In bunker drawn through iron tubing, in holds armoured & braided*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *None*

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 *None*

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

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 supplied with a voltmeter and an amperemeter, fixed *on Main 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 *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.

For *Messrs. Wm. Harvie & Co. Ltd.* Electrical Engineers Date *31.10.07*  
*A.S.*

**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:— *Electric light in compasses.*

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 *Yes*

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

*Alisa Shipbuilding Co. Limited*

*Alfred A. Nicoll* Builder's Signature. Date *5th November 1907*

**GENERAL REMARKS.**

*The electric light installation of this vessel has been fitted in accordance with the rules and satisfactorily tested under full power.*

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

Committee's Minute *Glasgow 11 NOV 1907*  
*Record Elec. light*

It is submitted that the Record Elec. Light be noted in the Reg. Book  
Lloyd's Register Foundation  
*12.11.07*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13-2m,34