

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 12429\* Port of Glasgow Received at London Office FRI 8 SEP 1893  
 Name of Ship "Olive" Built at Partick When built 1893.  
 Reg. Book. \_\_\_\_\_  
 Electric Light Installation fitted by Tom Harke & Co when fitted 1893

## DESCRIPTION OF DYNAMO AND ENGINE.—

One Harvee two pole gramme armature. Dynamo coupled direct to a 7"x6" Browett Lindley automatic engine.  
 Capacity of Dynamo 75 Amperes at 100 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Main deck in engine room. Over coal bunker

## LAMPS.—

Is vessel wired on single or double wire system double Total number of lights 99 arranged in the following groups:—

Group	Number of lights	Candle power	Total current (Amperes)
A	<u>39</u>	<u>16</u>	<u>23.4</u>
B	<u>17</u>	<u>16</u>	<u>10.2</u>
C	<u>17</u>	<u>16</u>	<u>10.2</u>
D	<u>9</u>	<u>16</u>	<u>5.4</u>
E	<u>17</u>	<u>16</u>	<u>10.2</u>
Mast head light	_____	_____	_____
Side light	_____	_____	_____

(In C. circuit.) 2 Cargo lights of 4.16cp candle power, whether incandescent or arc lights Incandescent

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

## SWITCHES AND CUT-OUTS—

Position of Main Switch Board Fore-ship Bulk at dynamo having switches to groups A. B. C. D. E. of lights as above

Positions of other switch boards and numbers of switches on each separate switch to each light except main deck & Saloon where 2 lights to one switch.

If cut outs are fitted to main circuit yes and to each auxiliary circuit yes

and at each position where cable is branched or reduced in size yes

If vessel is wired on the double wire system are cut outs fitted on each wire yes

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 25% per cent over the normal current

Are all cut outs fitted in easily accessible positions yes

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 \_\_\_\_\_

How are the lamps specially protected in places liable to the accumulation of vapour or gas \_\_\_\_\_

Are all switches and cut-outs constructed of unflammable materials and fitted on unflammable bases yes

## DESCRIPTION OF CABLES.—

Main cable carrying	<u>59.4</u> Amperes, comprised of	<u>19</u> wires, each	<u>16</u> legal standard wire gauge diameter
Branch cables carrying	<u>23.4</u> Amperes, comprised of	<u>19</u> wires, each	<u>18</u> legal standard wire gauge diameter
Branch cables carrying	<u>10.2</u> Amperes, comprised of	<u>2</u> wires, each	<u>12</u> legal standard wire gauge diameter
Leads to lamps	<u>.6</u> Amperes, comprised of	<u>1</u> wires, each	<u>18</u> legal standard wire gauge diameter
Cargo light cables carrying	<u>2.4</u> Amperes, comprised of	<u>50</u> wires, each	<u>32</u> legal standard wire gauge diameter

The copper used has a conductivity of 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 750 megohms per statute mile after 24 hours' immersion in seawater



DESCRIPTION OF INSULATION, PROTECTION, &c.—

Vulcanised Rubber braided and saturated with non corrosive compound.

PS 109

Joints in cables, how made, insulated, and protected all carefully spliced and soldered insulated with pure rubber & rubber solution with protective tape over all

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

How are cables led throughout the ship through bunkers, main & forward hold - thro Iron tubing elsewhere in wood casing.

What special protection has been provided for the cables in open alleyways wood casing

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

What special protection has been provided for the cables near boiler casings Iron tubing & wood casing

What special protection has been provided for the cables in engine room Iron tubing & wood casing

How are cables carried through decks wood lined Iron tubes and through bulkheads Iron tubes

Are any cables run through coal bunkers yes or cargo spaces yes If so, how are they protected Iron tubes

Are any lamps fitted in coal bunkers or spaces which may be used for cargo yes

If so, how are they specially protected Iron tubes & wood casing.

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

TESTING, &c.—

Has the installation been thoroughly tested to its full capacity during a trial of 12 hours' duration

The insulation resistance of the whole installation was not less than 300 megohms

The installation is supplied with a voltmeter and an ammeter, fixed at switchboard

General Remarks.—

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.

Wm Harvie & Co

Electrical Engineers

Date 30 August 1893

COMPASSES.—

Distance between dynamo and standard compass 45 ft

Distance between dynamo and steering compass 112 ft.

The nearest cables to the compasses are as follows:—

A cable carrying Amperes feet from standard compass feet from steering compass

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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 No deviation degrees on N.S.W. course in the case of the standard compass

and No deviation degrees on N.S.W. E course in the case of the steering compass.

David M. Henderson & Co

Builder's Signature

Date 6th Sept 1893

J. Shearley for J. Bradley

Surveyor's Signature

Date 7th Sept 1893



Lloyd's Register Foundation