

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No 27918.

Port of Glasgow Date of First Survey 10<sup>th</sup> June Date of Last Survey 8<sup>th</sup> July 09 No. of Visits 5.  
 No. in 6 in Sapp on the Iron or Steel 1/2 Sand Grouse Port belonging to Lagos  
 Reg. Book Renfrew By whom W. Simons & Co Ltd No 485 When built 1909  
 Owners Government of Southern Nigeria Owners' Address Glasgow  
 Yard No. 485 Electric Light Installation fitted by J. Charters When fitted 1909

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Compound two Crank engine coupled direct to Compound dynamo.

Capacity of Dynamo 118 Amperes at 102 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Propelling Eng. Room Whether single or double wire system is used Double  
 Position of Main Switch Board beside dynamo having switches to groups 14 switches of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Engine Room 12 switches, Pump engine Room 9 sws., Crew 2 switches, Aft Accomd<sup>n</sup> 2 sws. Whulhouse 3 sws.

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 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

Total number of lights provided for 80 216 CP. 3 232 CP. arranged in the following groups:—  
17 250 CP. 7 2300 CP.

A	lights each of	candle power requiring a total current of	Amperes
<u>Please see</u>			
B	lights each of	candle power requiring a total current of	Amperes
C	<u>attached sheet</u> lights each of	candle power requiring a total current of	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
1	Mast head light with 1 lamp each of	32	candle power requiring a total current of 1.1 Amperes
2	Side light with 1 lamp each of	32	candle power requiring a total current of 2.2 Amperes
	Cargo lights of		candle power, whether incandescent arc lights

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

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

## DESCRIPTION OF CABLES.

Main cable carrying	Amperes, comprised of	wires, each	L.S.G. diameter,	square inches total sectional area
<u>106</u>	<u>37</u>	<u>16</u>	<u>1176</u>	
Branch cables carrying	Amperes, comprised of	wires, each	L.S.G. diameter,	square inches total sectional area
<u>Please see attached sheet</u>				
Branch cables carrying	Amperes, comprised of	wires, each	L.S.G. diameter,	square inches total sectional area
Leads to lamps carrying	Amperes, comprised of	wires, each	L.S.G. diameter,	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.

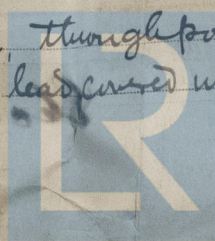
Pure & Vulcanized India Rubber, L.R. coated tape, trailing & comp-ound.

Joints in cables, how made, insulated, and protected none made.

Are all the joints of cables thoroughly soldered, resin only having been used as a fix 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 engine Rooms, stokehold, through pockets, in Crew quarters to top deck in secured iron tube, accomod<sup>n</sup> lead covered wire in casing.





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 *Iron tubes*

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

What special protection has been provided for the cables near boiler casings *Iron tubes*

What special protection has been provided for the cables in engine room *Iron tubes*

How are cables carried through beams *In fibre through bulkheads, &c. in tubes*

How are cables carried through decks *in tubes*

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

If so, how are they protected *In iron tubes*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *no except stoves*

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*

Deck Cargo light cables, whether portable or permanently fixed *Permanent* How fixed *run in tubes*

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

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 board*

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 *2500* 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. Chartas*

Electrical Engineers

Date *21<sup>st</sup> June 1909*

COMPASSES.

Distance between dynamo or electric motors and standard compass

*130 ft*

Distance between dynamo or electric motors and steering compass

*130 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>18</i>	Ampères	<i>about</i>	<i>10</i>	feet from standard compass	feet from steering compass
A cable carrying	<i>1.8</i>	Ampères	<i>-</i>	<i>14</i>	feet from standard compass	feet from steering compass
A cable carrying	<i>-</i>	Ampères	<i>-</i>	<i>-</i>	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*

electric currents, etc., was found to be *nil* agrees on *nil* course in the case of the standard compass and *nil* degrees on *nil* course in the case of the steering compass.

*Wm. G. Simons & Co. Ltd.*

Builder's Signature. Date *July 1909*

GENERAL REMARKS. *This installation has been fitted in accordance with the rules and works satisfactorily*

*It is submitted that this vessel is eligible for the notation "Elec. Light"*

*DRR 15/7/09*

*Harry Clarke*

Surveyor to Lloyd's Register of British and Foreign Shipping

Committee's Minute *GLASGOW 13 JUL 1909*

*Elec. Light*



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THE SURVEYORS ARE REQUESTED TO WRITE ACROSS THIS MARGIN.

*HHH 10/9/09*

*Im. 87.*