

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 46392

Port of Newcastle Date of First Survey Oct 26 03 Date of Last Survey Jan 16 04 No. of Visits 6  
 No. in Reg. Book 3 on the Iron or Steel 's Lady Strathcona' Port belonging to Newcastle  
 Built at Low Walker By whom Sir W. G. Armstrong Whitworth & Co. When built 1903  
 Owners Wm. Peterson & Co. Owners' Address Newcastle on Tyne  
 Yard No. 744 Electric Light Installation fitted by Falconar Bros & Co. When fitted 1903

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Combined direct coupled Steam generating Set 6" x 5" Engine to 4 B.V. Dynamo.

Capacity of Dynamo 55 Amperes at 110 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Engine Room

Position of Main Switch Board Engine Room having switches to groups 4 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Engine Room 12, Saloon & Officers Cabins 24, Forecastle 6 Engineers berths 8

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

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 50 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 no

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

Total number of lights provided for 92 arranged in the following groups:—

A	<u>22</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>11</u>	Amperes
B	<u>24</u>	lights each of	"	candle power requiring a total current of	<u>12</u>	Amperes
C	<u>12</u>	lights each of	"	candle power requiring a total current of	<u>6</u>	Amperes
D	<u>14</u>	lights each of	"	candle power requiring a total current of	<u>7</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
<u>2</u>	Mast head light with	<u>2</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u> Amperes
<u>2</u>	Side light with	<u>2</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u> Amperes
<u>4</u>	Cargo lights of			<u>64</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 In Chart Room

## DESCRIPTION OF CABLES.

Main cable carrying 50 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, 0.060 square inches total sectional area  
 Branch cables carrying 11 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, 0.0128 square inches total sectional area  
 Branch cables carrying Amperes, comprised of wires, each L.S.G. diameter, 0.018 square inches total sectional area  
 Leads to lamps carrying 1 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.0018 square inches total sectional area  
 Cargo light cables carrying 2 Amperes, comprised of 70 wires, each 40 L.S.G. diameter, 0.0018 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

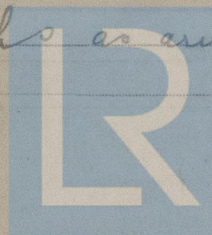
Cables all insulated with pure & vulcanized I. B. taped & compounded then lead covered

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 flux no 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 no

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 Through tween decks as armoured cables protected & in addition by wood casing



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**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 pipe*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Armouring with G.I. wire*

What special protection has been provided for the cables near boiler casings *Armouring with G.I. wire*

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

How are cables carried through beams *through insulated bushes* through bulkheads, &c. *through W.T. fluffing boxes*

How are cables carried through decks *through iron deck tubes*

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

If so, how are they protected *by G.I. wire armouring & wood casing*

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 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*

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 *by brass connector screwing socket*

How are the returns from the lamps connected to the hull *only main is or single wire system*

Are all the joints with the hull in accessible positions *yes*

**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 installation is *—* supplied with a voltmeter and *—* an amperemeter, fixed *on main S. Board*

The copper used is guaranteed to have a conductivity of *98* 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.

*Galeon Cross* Electrical Engineers

Date *18/1/04*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *76 feet*

Distance between dynamo or electric motors and steering compass *68 feet*

The nearest cables to the compasses are as follows:—

A cable carrying <i>two</i> Amperes <i>eight</i> 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 *all* course in the case of the standard compass and *nil* degrees on *all* course in the case of the steering compass.

*SIR W. G. ARMSTRONG & CO. LTD.*

Builder's Signature. Date *20<sup>th</sup> January 1904*

**GENERAL REMARKS.**

*This installation appears to have been fitted in a satisfactory manner and in accordance with the Rules*

*G. A. Lake*

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

Committee's Minute

*It is submitted that this installation appears to be satisfactory*

**Lloyd's Register Foundation**

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.